



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/478,235	01/04/2000	ALI NAJIB SALEH	M-7165-3P	1418
33031	7590	11/23/2004	EXAMINER	
CAMPBELL STEPHENSON ASCOLESE, LLP 4807 SPICEWOOD SPRINGS RD. BLDG. 4, SUITE 201 AUSTIN, TX 78759			PEZZLO, JOHN	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/478,235

Applicant(s)

SALEH, ALI NAJIB

Examiner

John Pezzlo

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8,10-35 and 37-69 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-35 and 37-45 is/are allowed.
- 6) ☐ Claim(s) 1-3,46-48,54-56 and 62-64 is/are rejected.
- 7) ☒ Claim(s) 49-53,57-61 and 65-69 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

I. Claims 1-3, 46-48, and 54-56 are rejected under 35 U.S.C. 102(e) as being anticipated by Basso et al. (US 6,370,119 B1) hereinafter Basso.

1. Regarding claims 1, 46, and 54 - Basso discloses a method and system for determining the optimal path for routing a communication in a communication network (a method of finding a path in a network). See Abstract. Fig. 1 discloses a communications network with a plurality of nodes and a plurality of links (comprises a plurality of nodes and a plurality of links). Fig. 4 discloses a routing table, which contains information for where the optimum routes are stored. See also col. 6, lines 6-16. Fig. 3 discloses a flow chart of the path computation procedure (generating at least one path cost data set). See also col. 5, lines 53-67, and col. 6, lines 1-6. After computation of optimal paths is complete, the optimal path from the predefined source node to the predefined destination node will be retrieved from the routing table at the table entry corresponding to the destination node (a minimum-hop path and a minimum cost path can be

Art Unit: 2662

determined from at the path cost data set). See col. 6, lines 6-16. The optimal path must fit two criteria in order to be considered the widest shortest path. First, the path must have the lowest symmetric restrictive cost, where restrictive cost refers to available bandwidth (minimum cost path having a minimum cost). See col. 2, lines 27-28, and col. 11, lines 3-5. Second, the optimal path must also have the lowest additive cost, where having the lowest additive cost includes having the minimal hop count (a minimum hop path represents a minimum number of hops). See col. 11, lines 7-11.

2. Regarding claims 2, 3, 47, 48, 55, and 56 - As mentioned previously, the optimal paths are stored in the routing table and later retrieved to determine the minimum-hop/minimum-cost path (storing path cost data in a path storage area such that they can be accessed). See col. 6, lines 6-16. It is inherent that the path storage area is allocated if the method or system is to update the table with new values when a new optimal path is found (allocating path storage area in a data structure).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

II. Claims 62-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Basso (same as above) in view of Busche (US 5,805,593).

1. Regarding claim 62 – Basso discloses that each routing table entry contains information on both restrictive cost and additive costs, where additive costs include hop count information. See Fig. 4 for an illustration of the entry. As mentioned above (claim 1), Basso discloses all the elements of claim 62 except the following.

Basso does not expressly disclose a structure of said path cost data set represents a hop count of a path between said root node (source) and said destination node.

Busche discloses a table (structure) that is sorted by hop count, where the hop count is organized by row. Fig. 2 and col. 4, lines 12-16 show a simplified example of a table.

It would have been to a person of ordinary skill in the art at the time of the invention to include a structure of said path cost data set represents a hop count of a path between said root node (source) and said destination node. One would have been motivated to do this because organizing by hop count, as opposed to source node/destination node, would allow the system to find the links with the shortest hop that exists between the present node and another node by simply looking at the first few columns and not having to traverse the whole table. This would allow for faster processing of this kind of information.

2. Regarding claims 63 and 64 - As mentioned previously, the optimal paths are stored in the routing table and later retrieved to determine the minimum-hop/minimum-cost path (storing path cost data in a path storage area such that they can be accessed). See col. 6, lines 6-16. It is

inherent that the path storage area is allocated if the method or system is to update the table with new values when a new optimal path is found (allocating path storage area in a data structure).

Allowable Subject Matter

Claims 10-35 and 37-45 are allowable over the prior art of record.

Claims 4-8, 49-53, 57-61, and 65-69 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments filed 7/19/2004 have been fully considered but they are not persuasive. On page 5 of the response applicant argues that Basso fails to teach all elements of Applicant's claim 1 and further teaches away from claimed embodiments of Applicant's invention. The examiner respectfully disagrees. Basso teaches routing packet from source (root) to destination using a combination of minimum-cost path (additive cost) and minimum-hop count, refer to column 2 lines 44 to 50. Basso teaches generating and accessing minimum-hop path and minimum-cost path can be determined from a path cost data set, refer to Fig. 4 and col. 6, lines 6-16, and col. 11, lines 3-13.

On page 2 and 3 of the response the Applicant argues the examiner's previous response related to the "lowest restrictive cost". The current examiner believes the previous examiner's remarks are accurate, refer to Basso, col. 2 lines 23 to 36 for a definition of restrictive cost. Basso utilizes a combination of minimum-cost path (additive cost) and minimum-hop count as well as restrictive cost to determine the routing path from the path cost data set. The examiner believes the reference Basso meets the limitations of the open-ended claim 1.

On pages 6 and 7 the Applicant argues the 103 rejection of claims 4, 49, 57, and 65 in which the examiner concurs and the rejection has been withdrawn. The 103 rejection of claim 62 is still being held since the combination of Basso and Busche reads on the claim and the examiner believes the motivation statement is valid and reasonable.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Art Unit: 2662

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Seid (US 5,754,543) discloses a connectivity matrix-based multi-cost routing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Pezzlo whose telephone number is (571) 272-3090. The examiner can normally be reached on Monday to Friday from 8:30 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C.

or faxed to:

(703) 872-9306

For informal or draft communications, please label "PROPOSED" or "DRAFT"

Hand delivered responses should be brought to:

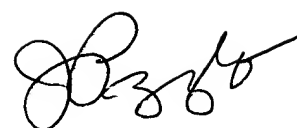
Application/Control Number: 09/478,235
Art Unit: 2662

Page 8

Jefferson Building
500 Dulany Street
Alexandria, VA.

John Pezzlo

17 November 2004

A handwritten signature in black ink, appearing to read 'J. Pezzlo', with a stylized flourish at the end.

JOHN PEZZLO
PRIMARY EXAMINER